



IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Application of:

BOYER, Frank

Examiner: Stephen Johnson

Appln. No. 10/800,403

Art Unit: 3641

Filed: 12 March 2004

For: SHOTGUN CHOKE WITH INTEGRAL WAD-STOPPING FEATURE

\* \* \* \* \*

June 14, 2007

SUPPLEMENTAL APPEAL BRIEF

Hon. Commissioner of Patents  
and Trademarks  
Washington, D.C. 20231

Sir:

This Brief is responsive to the Advisory Action dated 14 May 2007, and is further to Applicant's Appeal from the final rejection of Claim 3 of the subject application. No claims stand allowed.

REAL PARTY IN INTEREST

The real party in interest is the inventor, Frank Boyer, 11330 Wildberry Court  
Glen Rock, PA 17327.

RELATED APPEALS AND INTERFERENCES

Appellant avers that there are no other prior or pending appeals, interferences or judicial proceedings known to appellant, the appellant's legal representative, or assignee which may be

related to, directly affect or be directly affected by or have a bearing on the Board's decision in this pending appeal.

#### STATUS OF CLAIMS

Claims 1 and 3-9 are pending in the application. The rejection only of claim 3 is appealed. Please see Appendix A for a copy of claim 3 and parent claim 1 involved in the Appeal.

#### STATUS OF AMENDMENTS

The application was filed on March 12, 2004 and claims the benefit of Provisional Patent Application 60/454,368 filed March 12, 2003. A first official action was mailed 11 July 2005 and Appellant timely responded by Amendment filed 10 October 2005. A second and final Official Action was mailed 20 December 2005. Appellant initiated a telephone interview which failed to resolve the issues, and so the application exists as per the Amendment filed 10 October 2005, and no amendment was filed subsequent to final rejection.

#### SUMMARY OF CLAIMED SUBJECT MATTER

The present invention is a shotgun choke 2 with integral wad stopper [see FIG. 1 and 0017 of the published specification] comprising a hollow tubular member screw-inserted onto the muzzle end of an existing shotgun. The device is specifically for shotguns which fire multiple pellets, and it serves to confine the shot pattern of the impacting pellets. When the choke 2 is installed, the shot pellets pass through an inner channel 20 of the choke 2. [0019] As with conventional chokes, the inner channel 20 is tapered slightly to constrict the pellets passing there through in order to control the shot pattern. [0020] In accordance with the present invention, an integral wad-

stopping feature is accomplished by forming a pattern of annular sharp-edged [claim 3] steps from the input end through approximately 2/3 the length of the choke 2, the steps serving to catch and rapidly retard the cotton wad following the shot. A specific pattern of these steps is disclosed including steps at 1/10" inside the input end, 5/10" inside the input end, 9/10" inside the input end, 1 and 3/10" inside the input end, and 1 and 7/10" inside the input end. Each of the steps 30a-e are raised approximately 0.004" (0.1 mm), and the raised lip of each inward step-projection catches and progressively retards the traveling wad to separate it from the shot. In addition, the transition between each internal step 30a-e along the cylinder is horizontal so that the steps themselves define a progressively smaller internal diameter within the cylinder to contribute to the overall taper.

The above constitutes a concise explanation of the invention defined in the claims involved in the Appeal.

#### GROUND OF REJECTION TO BE REVIEWED ON APPEAL

There are six categorical issues set forth as follows:

1st: Whether claim 3 is anticipated under 35 U.S.C. 102(b) over Dow (2348114)?

2d: Whether claim 3 is obvious under 35 U.S.C. 103(a) as being unpatentable over Janecek et al. (2315207) and Catron (2372315)?

3d: Whether claim 3 is obvious under 35 U.S.C. 103(a) as being unpatentable over Briley (4386477) and Janecek et al. (2315207)?

4<sup>th</sup>: Whether claim 3 is obvious under 35 U.S.C. 102(b) as being anticipated by Linde (4058925)?

### APPELLANTS' ARGUMENT

1<sup>st</sup>: The Examiner clearly erred in rejecting claim 3 as being anticipated under 35 U.S.C. 102(b) over Dow (2348114).

Dow discloses a gun stabilizer for venting gases radially outward from a gun barrel, thereby stabilizing the gun. Venting gases eliminates kick-back, and Dow has nothing to do with confining or focusing the shot pattern of a shotgun. Dow employs a series of exhaust apertures formed as rectangular slots exiting the stabilizer. The Examiner erroneously equates this “flash suppressor” with a choke, but they are two different things and Dow is not a choke. Dow has no equivalent structure for confining or focusing the shot pattern of a shotgun, and conversely the present invention has nothing to do with flash suppressors. The present invention requires two distinct features: 1) an integral wad-stopping feature formed by a pattern of annular sharp-edged steps from the input end through approximately 2/3 the length of the choke, these steps serving to catch and retard the cotton wad following the shot; and 2) the inner channel of the gun barrel is tapered slightly from the input end through the length of the choke (by progressively constricting the stepwise annular wad-stopping projections), thereby constricting the pellets passing there through in order to control the shot pattern. In contrast, the Dow flash suppressor includes gas vents as “muzzle brakes” to disperse gas. The Examiner equates the gas vent openings of Dow with the stepwise annular wad-stopping projections of the present claim 3. However, claim 3 specifically requires a hollow tubular member having a coupling at one end for concentrically securing said tubular member to a shotgun, said tubular member being defined by an internal channel having a stepwise taper running away from the coupling end to constrict shotgun pellets passing there through; said stepwise taper being further defined by a plurality of raised annular step-projections spaced evenly along at least two-thirds a length of said channel and each defined

by a sharp edge disposed toward said coupling end of said tubular member to retard and separate wadding from behind said shotgun pellets while passing through said tubular member.

Dow's flash suppressor has a coupling at one end for concentrically securing said tubular member to a gun, and the tubular member has an internal channel through which shot passes. However, the vents are not in communication with the channel at all, but instead open outwardly from an outer wall of the flash suppressor. Consequently, these vents do not define the channel at all, and it cannot be said that the internal channel has "a stepwise taper running away from the coupling end to constrict shotgun pellets passing there through" as required by claim 3 (vis a vis parent claim 1). Moreover, since Dow's vents are exterior to the bore of the barrel (the channel), the channel itself is not "defined by a plurality of raised annular step-projections spaced evenly along at least two-thirds a length of said channel and each defined by a sharp edge disposed toward said coupling end of said tubular member to retard and separate wadding from behind said shotgun pellets while passing through said tubular member" also as required by claim 3. Indeed, Dow's gas vents are not annular step-wise projections having sharp leading edges facing the shot, the vents never even come in contact with the shot or the wad, and they certainly don't meet the literal language of claims 1 and 3, nor the spirit and intent (as reflected in the functional language) to constrict the pellet pattern whilst retarding and separate wadding from behind shotgun pellets passing through the channel. Dow is for venting gases, not for catching a shotgun wad while patterning the shot. In addition to the foregoing distinctions, Appellant notes that Dow shows an tubular member with an open-chamber with an exit channel extending only partially through the tubular member. This would be inoperative in shotgun as pellets would spread into the chamber and destroy the vents before exiting through the channel. Claim 3 (via claim 1) distinguishes on this basis as well since the tubular member is not "defined by an internal channel

having a stepwise taper running away from the coupling end” to constrict shotgun pellets passing there through. The channel only exits the tubular member. On the basis of these structural limitations which are not met by Dow, claim 3 is patentably distinguished.

2d: The Examiner clearly erred in rejecting claim 3 under 35 U.S.C. 103(a) as being unpatentable over Janecek et al. (2315207) and Catron (2372315).

According to the Examiner, Janecek et al. discloses all elements of the invention of claim 1 except for a projectile including a plurality of pellets. In fact, Janecek discloses a single-bullet size reducer in which a bullet passing through is chiseled down by a series of teeth to a smaller caliber. Catron '315 discloses an anti-recoil shotgun with no similarities to the present invention other than the fact that it shoots a shotgun cartridge including wadding and pellets. Nevertheless, the Examiner maintains that one skilled in the art would find it obvious to use the caliber-reducer of Janecek et al. with shotgun cartridges as in Catron to provide the choke with wad stopper of the present invention. This is in error for three reasons. First, both of these cited references are non-analogous art. Analogous art is that which is "reasonably pertinent to the particular problem with which the inventor is involved." *Heidelberger Druckmaschinen AG v. Hantscho Commercial Prods., Inc.*, 21 F.3d 1068, 1072, 30 USPQ2d 1377, 1379 (Fed. Cir.1994). The particular problem pursued in the present invention is the separation of wad from shot (wad stopper), plus the constriction of the shot pattern of shotgun pellets (choke), in a combined format. One skilled in the art seeking to solve the foregoing problems would have no motivation to look to either of the foregoing patents inasmuch as neither one attempts to separate wad from shot (wad stopper), or constrict the shot pattern of shotgun pellets (choke), let alone in a combined format. Second, any attempt to fire a shotgun cartridge as in Catron '315 through a bullet size reducer (Janecek) would

destroy both, and the combination suggested by the Examiner is inoperative. Third, to establish obviousness based on a combination of the elements disclosed in the prior art, there must be some motivation, suggestion or teaching of the desirability of making the specific combination that was made by the applicant." There is no such motivation here.

Finally, even if the combination is proper it still fails to show "A choke with integral wad stopper" as required by claim 3 (via claim 1), or a choke for use with an existing shotgun (Janecek et al. only works with single shot carbines) or an internal channel having *a stepwise taper running away from the coupling end* to constrict shotgun pellets passing there through, nor any "raised annular *step-projections* spaced evenly along at least two-thirds a length of said channel to retard and separate wadding from behind said shotgun pellets while passing through said tubular member." (Janecek et al. only has knife-edged rings but no stepwise taper, and for an entirely different purpose). Catron '315 fails to teach or suggest any of these structural features. Accordingly, claim 3 is distinguished.

3d: The Examiner clearly erred in rejecting claim 3 under 35 U.S.C. 103(a) as being unpatentable over Briley (4386477) and Janecek et al. (2315207).

Briley '477 is a shotgun choke with a straight taper, but without any wad stopping feature. One skilled in the art seeking to add such a feature would not look to Janecek's single-bullet size reducer in which a bullet passing through is chiseled down by a series of teeth to a smaller caliber. The two references have different purposes and there is no motivation, suggestion or teaching of the desirability of making the specific combination that was made by the applicant." Even if there were the combination fails to teach a "plurality of raised annular step-projections comprises

a sharp edge disposed toward said coupling end of said tubular member” as required by claim 3. Accordingly, claim 3 is distinguished.

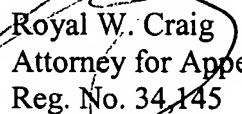
4<sup>th</sup>: The Examiner clearly erred in rejecting claim 3 under 35 U.S.C. 102(b) as being anticipated by Linde (4058925).

Linde ‘925 discloses a shotgun choke formed with an internal channel having a stepwise taper, but in the exact opposite direction (it runs toward or becomes more constricted toward the barrel of the gun). Thus, Linde attempts to gradually spread a shot pattern, not constrict shotgun pellets passing there through as required by claim 3. There is no “plurality of raised annular step-projections comprises a sharp edge *disposed toward said coupling end of said tubular member*”. Moreover, Linde does not and cannot retard and separate wadding from behind said shotgun pellets while passing through the tubular member. Therefore, claim 3 is distinguished

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For the reasons set forth herein, it is believed that the Examiner erred and that this application clearly and patentably distinguishes over the prior art and is in proper condition for allowance. Reversal is respectfully requested.

Respectfully submitted,

  
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## APPENDIX A: Claims Appendix

1. A choke with integral wad stopper for use with an existing shotgun, comprising:  
a hollow tubular member having a coupling at one end for concentrically  
securing said tubular member to a shotgun, said tubular member being defined by an internal  
channel having a stepwise taper running away from the coupling end to constrict shotgun pellets  
passing there through;  
said stepwise taper being further defined by a plurality of raised annular step-projections  
spaced evenly along at least two-thirds a length of said channel to retard and separate wadding  
from behind said shotgun pellets while passing through said tubular member.
3. A choke according to claim 1, wherein each of said plurality of raised annular step-  
projections comprises a sharp edge disposed toward said coupling end of said tubular member.

## **APPENDIX B: Evidence Appendix**

**There has been no evidence submitted pursuant to 37 C.F.R. §§ 1.130, 1.131, or 1.132 nor any other evidence entered by the Examiner and relied upon by appellant in the appeal.**

#### APPENDIX C: Related proceedings appendix

As stated above, there are no related appeal proceedings, nor any decisions rendered by a court or the Board in any related appeal proceeding.